

**In the Claims:**

Please amend the claims as indicated in the separate sheets attached below and entitled "Claim Amendments Filed 06/23/05 with Response to Office Action mailed by Examiner on 12/23/04 in Patent Application No. 10/735,862".

**REMARKS**

Minor amendments are made to claims 2-30, 35-65 and 70-84 to improve the readability thereof, such as, for example, by conforming preambles of independent and dependent claims. The dependencies of claims 47 and 83 are amended to improve readability or provide more proper antecedent basis. The amendments do not reduce the scope of the claims and are not related to patentability.

Now in the case are claims 1-96, of which claims 1, 34, 69, 88, 89, 92 and 95 are independent.

**Independent claims 1, 34, 69, 92 and 95**

Each of independent claims 1, 34, 69, 92 and 95 recites the use of three pairs of reflectors in a particular arrangement recited in each of the claims.

The above claims are rejected as obvious over MacCormack, although the Examiner acknowledges on page 4 of the outstanding Office Action that MacCormack fails to show three pairs of reflectors arranged as recited in the claims. No additional art whatsoever is cited in support of the assertion that it would be obvious to one of ordinary skill in the art to modify MacCormack to include at least three pairs of reflectors. The Examiner instead relies on the bare, unsupported assertion that the invention as recited in claims 1, 34, 69, 92 and 95 would be obvious to one of ordinary skill in the art.

It is respectfully submitted that MacCormack fails to establish a prima facie case of obviousness. Reference is made to MPEP § 2143.01 and the directives to Examiners noted therein regarding required suggestion or motivation to modify references. MPEP § 2143.01 states (emphasis added):

Obviousness can *only* be established by combining the teachings of the prior art to produce the claimed invention when there is *some* teaching, suggestion, or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art.

In explaining the sort of teaching required, MPEP § 2143.03 specifically notes In Re Fine. MPEP § 2143.01 states:

In In Re Fine the claims were directed to a system for detecting and measuring minute quantities of nitrogen compounds comprising a gas chromatograph, a converter which converts nitrogen compounds into nitric oxide by combustion, and a nitric oxide detector. The primary reference disclosed a system for monitoring sulfur compounds comprising a chromatograph, combustion means and a detector, and a secondary reference taught nitric oxide detectors. The examiner and the Board asserted that it would have been within the skill of the art to substitute one type of detector for another on the system of the primary reference; however the court found there was no support or explanation of this conclusion and reversed.

The Examiner in the present case merely states that “it would have been obvious to one of ordinary skill in the art the time the invention was made to modify MacCormack to have more than three pairs of reflective gratings”. The alleged motivation is that “plurality of pairs of reflective gratings provide plurality of resonance cavities which enable the fiber laser to output plurality of wavelengths for more robust optical applications” (Page 4, outstanding Office Action).

It is respectfully submitted that there is less motivation to provide, from “thin air”, an additional pair of reflectors to Figure 4 of MacCormack (assuming *arguendo* and without any admission that provision of such another pair of reflectors yields the invention recited in the claims) than there was to *substitute* one detector for another in the system of In Re Fine, where the prior art apparently at least taught the *entire analogous structure* to the claimed invention, including at least some sort of detector. All that was required in In Re Fine was the *substitution* of another type of detector, taught by a secondary reference, for the detector shown. However, the invention was found to be patentable for lack of appropriate motivation to make the substitution.

Accordingly, it is respectfully submitted that MacCormack fails to establish a *prima facie* case that the above noted claims are obvious, as there is no proper motivation to modify MacCormack.

Applicants further respectfully submit that in the present case reliance on unsupported assertions of what is commonly “known in the art” is inappropriate. See MPEP § 2144.03 (emphasis in original): “It is not appropriate for the examiner to take official notice of facts without citing a prior art reference where the fact asserted to be well-known is not “capable of instant and unquestionable justification as being well-known”. Applicants respectfully submit that the use of three or more pairs of reflectors in the particular arrangement recited in the claims is certainly not the simple type of fact “capable of instant and unquestionable justification as being well-known in the prior art.” See MPEP § 2144.03 (emphasis added): “assertions of technical facts in areas of esoteric technology or specific knowledge or prior art *must* always be supported by citation of some reference work recognized as standard in the pertinent art.” The optical technology with which the claims under consideration are concerned, which can include, for example, Raman phenomena, is sufficiently esoteric such that citation to a standard work is necessary to support the assertion being relied upon. Applicants respectfully submit that no art is cited because the above noted claims recite patentable subject matter.

Accordingly, reconsideration and withdrawal of the rejection of claims 1, 34, 69, 92 and 95 and claims dependent therefrom is respectfully requested. Regarding claims 72-84, it is respectfully submitted that Dianov fails to remedy the above-noted defects of MacCormack.

If the Examiner intends to maintain the rejection merely on the bare assertion of “common knowledge” or “well known” prior art, Applicants respectfully request that the Examiner provide an affidavit, as set forth in MPEP § 2144.03 and 37 CFR 1.104(d)(2), with the next Office Action.

#### Independent Claims 88 and 89

MacCormack fails to establish a prima facie case of obviousness of independent claims 88 and 89. Each and every limitation of a claim must be considered. Both independent claims 88 and 89 recite limitations not taught or suggested by MacCormack. For example, both claims 88 and 89 recite “wherein the plurality of reflectors are configured so that when the optical fiber receives energy at the wavelength  $\lambda_p$ , a ratio of an output power at an output wavelength to a power received by the optical fiber at the wavelength  $\lambda_p$  is at least about 20% of a theoretical limit, the output wavelength being different than  $\lambda_p$ .”

Accordingly, reconsideration and withdrawal of the rejection of independent claims 88 and 89, and claims dependent therefrom, is respectfully requested.

Finally, it is in general noted that Applicants disagree with the Examiner’s assertion on page 2 of the outstanding Office Action that MacCormack “discloses an optical fiber with all the limitations set forth in the claims ...”, and make no admission regarding the teachings of MacCormack. Applicants reserve the right to show in subsequent communications in this or another forum that claim features asserted by the Examiner to be disclosed by MacCormack are in fact not taught or suggested by MacCormack.

Request for Three Month Extension of Time

Applicants hereby request a Three Month Extension of Time for response to the outstanding Office Action mailed December 23, 2004, thereby extending the time for response to June 23, 2005. Authorization is hereby granted to charge the Small Entity fee of \$510 for the requested Three Month Extension of Time to Nufern Deposit Order Account Number 50-2343.

**CONCLUSION**

This Response and Amendment attends to all issues raised in the outstanding Office Action. Reconsideration and withdrawal of the rejections and objections raised in the outstanding Office Action are respectfully requested, as is early allowance and passage to issue. No fees other than the fees associated with the Request for a Three Month Extension of Time are considered to be due in conjunction with the submission of this Response and Amendment. However, if it is determined that an additional fee is due or that Applicants are underpaying or overpaying a fee, further authorization is hereby granted to debit or credit, as appropriate, Nufern Deposit Order Account 50-2343.

Please do not hesitate to contact the undersigned if any issues are deemed to remain unresolved.

Respectfully submitted,



Peter J. Rainville, Reg. No. 41,263  
Nufern  
7 Airport Park Road  
East Granby, CT 06026  
860-408-5022  
[prainville@nufern.com](mailto:prainville@nufern.com)

Date: June 23, 2005